FACT SHEET

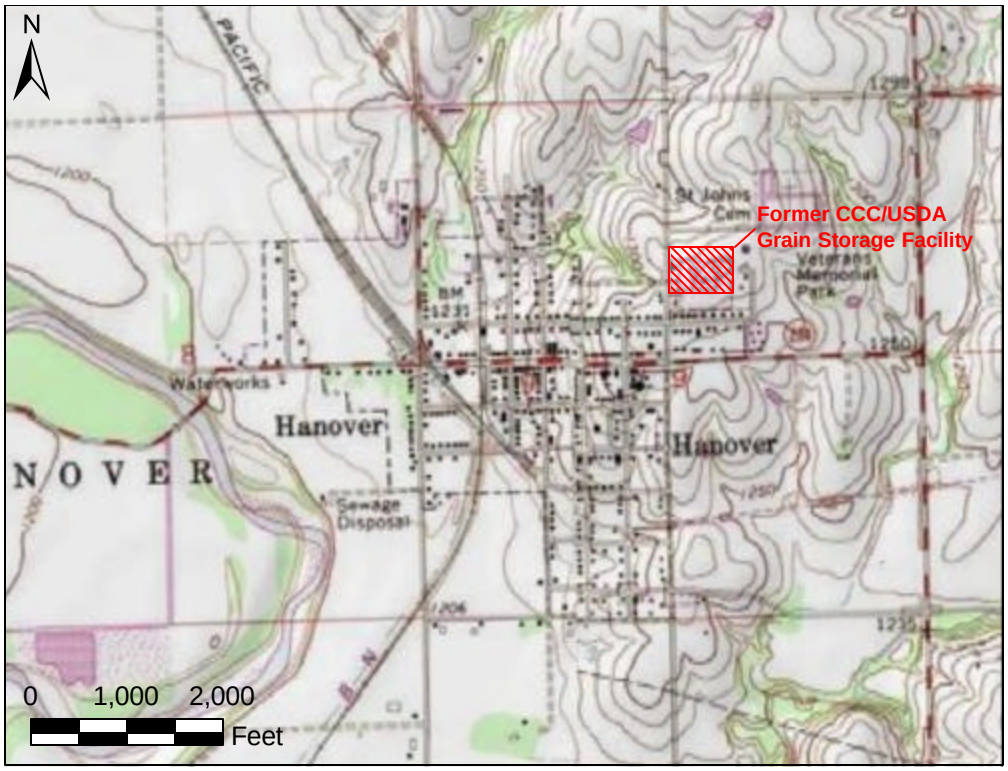
May 2009 - Former CCC/USDA Grain Storage Facility - Hanover, Kansas

Background Information

The Hanover USDA Site is located in the northeastern section of Hanover, Kansas. Past use of grain fumigants at the former facility has resulted in soil and groundwater contamination at the Site. The contaminated groundwater has migrated beyond the former property boundaries to other areas within the City of Hanover.

Contamination from the Site has not impacted the City of Hanover's water supply. Hanover obtains its water supply from the Washington County Rural Water District (RWD) #1. The RWD wells are located several miles north of the Site.

The Kansas Department of Health and Environment (KDHE) Bureau of Water (BOW) mandates frequent testing of public water supplies. Carbon tetrachloride (from an unrelated source) was detected at concentrations below the U.S. Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL) of 5 parts per billion (ppb) in a sample collected from the RWD on August 11, 2008.



The environmental investigation is ongoing at the former CCC/USDA grain storage facility in Hanover, Kansas. The property boundary of the former facility is shown in red.

History of the Hanover USDA Site

The Commodity Credit Corporation (CCC), an agency of the U.S. Department of Agriculture (USDA), operated a grain storage facility on approximately 6.5 acres in Hanover from 1950 to the early 1970s. During its operations, a grain fumigant known as 80/20, named for its composition of 80% carbon tetrachloride and 20% carbon disulfide, was used at the facility. The former facility was developed as residential property in the mid-1970s.

Carbon tetrachloride and its degradation product chloroform were first detected in private wells near the Site in February 1998. The wells were tested as part of a KDHE-led statewide well sampling program targeting wells near former CCC/USDA facilities. Additional sampling was conducted in July 1998, when KDHE collected soil samples to determine whether the former facility was a potential source for the carbon tetrachloride contamination. Soil samples were collected from several soil borings. Private well sampling conducted in 2006 confirmed the presence of carbon tetrachloride in groundwater in the area.

In 2007, Argonne National Laboratory (Argonne) conducted soil sampling at the former facility on behalf of the CCC/USDA. Concurrently with the soil sampling, Argonne also collected indoor air samples from several homes built within the footprint of the former facility. Carbon tetrachloride was detected at low levels in several soil and indoor air samples.

Based on these data, KDHE requested CCC/USDA conduct a full site investigation to determine the extent and magnitude of contamination in groundwater, soil and indoor air. With approval from KDHE, Argonne initiated sampling activities in January 2009.

Carbon Tetrachloride: The Facts

Carbon tetrachloride is a manufactured chemical that has been used for fumigation, as a cleaning fluid and degreasing agent, in fire extinguishers and in spot removers. The use of carbon tetrachloride for these applications has been banned due to its harmful health effects; it is used in some industrial applications.

Exposure to carbon tetrachloride can occur through inhalation, ingestion and dermal contact. Acute exposure to carbon tetrachloride can cause liver, kidney and nervous system damage. The U.S. Environmental Protection Agency has categorized the contaminant as a probable human carcinogen.

Additional information about carbon tetrachloride and other chemicals is available on the Agency for Toxic Substances and Disease Registry's website (www.atsdr.cdc.gov).

Our Vision: Healthy Kansans living in safe and sustainable environments

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Current Investigation

To date, approximately 45 groundwater monitoring wells and 25 soil borings have been installed to define the extent and magnitude of contamination at and emanating from the Site. Carbon tetrachloride has been detected in groundwater at concentrations up to 617 parts per billion (ppb). The U.S. Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL) for the contaminant is 5 ppb. Chloroform was detected in groundwater at concentrations up to 18 ppb, all below the MCL for chloroform of 80 ppb. Neither carbon tetrachloride nor chloroform were detected in soil samples at concentrations above KDHE's Tier 2 Levels for the contaminants of 200 ppb and 960 ppb, respectively.

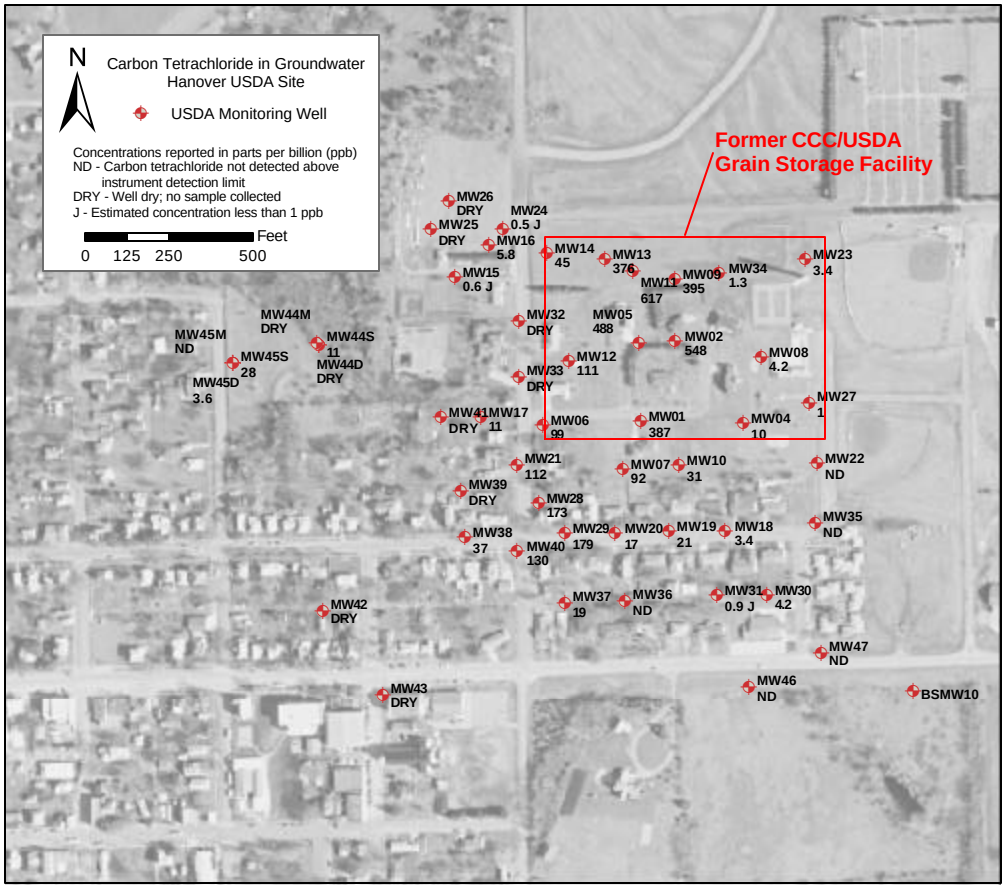
As part of the investigation, KDHE asked that CCC/USDA confirm the locations and uses of private wells near the Site. Carbon tetrachloride was not detected in any private wells near the Site that are used for drinking water purposes.

Once the investigation is complete, KDHE and CCC/USDA will work with the community in determining the appropriate methods to cleanup contamination at the Site.

Vapor Intrusion Assessment

In 2009, indoor air and subslab samples were collected from many homes near the Site. Carbon tetrachloride was detected in indoor air samples at concentrations up to 26 micrograms per cubic meter ($\mu g/m^3$). This concentration exceeds KDHE's Tier 2 Level for indoor air of 1.6 $\mu g/m^3$. The concentrations detected do not pose an immediate health hazard; however, concentrations that exceed KDHE's Tier 2 Levels may pose a health hazard over the long term.

KDHE is working closely with CCC/USDA to determine the steps necessary to address residential indoor air contamination resulting from vapor intrusion.



Groundwater contamination at the Hanover USDA Site.

Public Involvement Opportunity

KDHE has scheduled a public availability session for May 28, 2009 at the Kloppenberg Senior Center in Hanover at 7:00 PM. KDHE will present the results of the ongoing site investigation and discuss many topics of concern to the community. Based on the level of public interest, KDHE may plan additional public availability sessions to discuss results of the site investigation and to gain public input on future remedial actions. KDHE will also provide fact sheets on an as-needed basis. If you have questions or comments, you may contact the following KDHE officials:

Beth Finzer, Project Manager
Site Remediation Unit
785-296-1936 ¦ bfinzer@kdheks.gov

Chris Carey, Environmental Scientist
KDHE Vapor Intrusion Point of Contact
Site Remediation Unit
785-296-0225 ¦ ccarey@kdheks.gov

E. Jean Underwood, Chief
Site Remediation Unit
785-291-3255 ¦ junderwood@kdheks.gov

1000 SW Jackson Street, Suite 410
Topeka, Kansas 66612